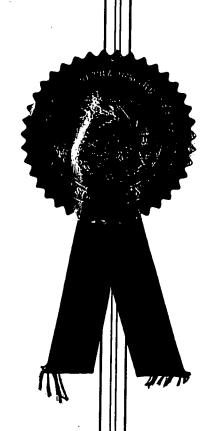
The United States of America



The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

Buce Telman
Commissioner of Patents and Trademarks

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United States Patent [19]

Sainton

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[45] Date of Patent:

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[54] APPARATUS AND METHODS FOR NETWORKING OMNI-MODAL RADIO DEVICES

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[21] Appl. No.: 709,112

[22] Filed: Sep. 6, 1996

Related U.S. Application Data

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[51]	Int. CL6		H04Q	7/22
[21]	Int. CL	***************************************	H04Q	7/2

455/454, 517, 524, 552; 379/59, 60

[56]

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Primary Examiner-Edward F. Urban

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57] ABSTRACT

A network and method of operating a network of wireless service providers adapted to interact with a plurality of omni-modal wireless products within a given geographic area in a manner to permit the wireless service providers to "borrow" radio frequencies from other wireless service providers within the same geographic region. As a cellular service provider in a given region finds that one of its service areas or cells has become nearly or fully loaded, frequency could be borrowed from a competitor, such as a PCS provider serving the same region. Selected omni-modal wireless product users in the overloaded area would be told to switch their omni-modal to the "leased" frequency but to use the non-PCS communications protocol appropriate to the type of service desired by the user. Implementation of this method broadly within a given geographic region will have the effect of insuring that the available radio spectrum is used to its maximum capacity to serve the needs of the wireless users on a real time basis.

24 Claims, 16 Drawing Sheets

